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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/797,552

03/10/2004

Carlos A. Aloise

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08/17/2006

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EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 08/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/797,552

Applicant(s)

ALOISE ET AL.

Examiner

Marc Jimenez

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 48-89 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 48-89 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5-27-04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because it is too long. Correction is required.

See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. **It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited.** The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The disclosure is objected to because of the following informalities: - - now patent number 6,783,438 - - should be included after "2002" in the first line of the specification.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 48-89** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 48, 66, and 79 recite “the diameter” in lines 6, 9, and 9 respectively, which lacks proper antecedent basis.

Claim 51 recites “the material” which is unclear because there are two materials in claim 48. It is unclear whether the first material or recast layer is being referred to.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 48-89** are rejected under 35 U.S.C. 103(a) as being unpatentable over Farzin-Nia et al. (US6149501) in view of Packer et al. (US6158304).

Farzin-Nia et al. teach a method for forming an endodontic instrument comprising: removing material (figure 2) having a first hardness from an instrument blank 8 to form a plurality of flutes having a non-directional surface finish (see figures 2-3C), wherein at least about 25% of the diameter of the instrument blank is removed at a point of maximum metal removal (see for example, figure 3B) at a point of maximum metal removal.

Farzin-Nia et al. removes material by grinding (figures 2 and 3).

Farzin-Nia et al. teach the invention cited above with the exception of removing the material by electrical discharge machining, wire electrical discharge machining, electrical discharge grinding or electrochemical machining and redepositing at least a portion of the removed material on the flutes being formed to form a recast layer having a second hardness of at least about 15% greater than the first hardness.

Packer et al. teach removing material by using grinding, wire electrical discharge cutting (wire EDM), and electrical discharge grinding (EDG). In addition, Packer et al. teach applying a harder material on flutes being formed 14.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Farzin-Nia et al. with the claimed removing methods and redepositing at least a portion of the removed material on the flutes being formed to form a recast layer having a second hardness greater than the first hardness, in light of the teachings of Packer et al., in order to provide an accurate and efficient machining operation and in order to provide strengthened flutes. The use of a material 15% greater than a first hardness is inherently taught by Packer et al. who suggests using a much harder material to strengthen the flutes. Also, it would have been an obvious matter of design choice to a person of ordinary skill in the art, at the time of the invention, to have provided the claimed second hardness strength, depending upon the desired strength and application requirements of the instrument.

Farzin-Nia et al. teach a wire 8, twisting (figure 1), using a superelastic material (col. 3, line 28, NiTi), at least about 40% titanium (col. 3, line 40), and copper (col. 3, line 44). Farzin-Nia et al. recognizes that steel could be used (col. 3, line 35). Furthermore, the use of a particular material is clearly a matter of obvious design choice depending upon the desired strength

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characteristics needed for the part. Farzin-Nia et al. also teach rotating the blank and machining the flutes. Packer teaches that it is conventional to use EDM or EDG. It is inherent in EDM or EDG to advance an electrode past the blank without direct contact to remove material.

The particular advancing rate is considered an obvious matter of design choice to a person of ordinary skill in the art, at the time of the invention, depending upon the desired accuracy of the cut required.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. **Claims 48-56 and 62-65** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-30 of copending

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Application No. 11/216,890 (hereinafter '890). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claims 48-51 of the instant application can be found in claims 16 and 30 of '890.

Claims 52 and 54 of the instant application can be found in claim 23 of '890.

Claim 53 of the instant application can be found in claim 22 of '890.

Regarding claims 55-56, the use of steel is considered an obvious matter of design choice depending upon the desired strength requirements needed for the part.

Regarding claims 62-65, the advancing of an electrode is inherent with EDM processes.

The difference between claims of the instant application and claims of the '890 application lies in the fact that the '890 application includes many more elements and is thus much more specific. Thus the invention of claims '890 application is in effect a "species" of the "generic" invention of claims in the instant application. It has been held that the generic invention is "anticipated" by the "species". See *In re Goodman*, 29 USPQ2d 2010 (Fed. Cir. 1993).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. **Claims 57-61 and 66-89** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-30 of copending Application No. '890 in view of Farzin-Nia et al. '890 claims essentially the invention as claimed in the instant application with the exception of claiming rotatably indexing as claimed.

Farzin-Nia et al. teach indexing as claimed (see figure 2).

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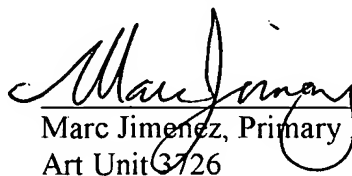
Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of '890 with indexing, in light of the teachings of Farzin-Nia et al., in order to create symmetrically shaped flutes.

This is a provisional obviousness-type double patenting rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Marc Jimenez, Primary Examiner  
Art Unit 3726

MJ  
8-14-06